



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/801,453

03/15/2004

Ole Simonsen

10327.200-US

3244

25908 7590 01/10/2008
NOVOZYMES NORTH AMERICA, INC.
500 FIFTH AVENUE
SUITE 1600
NEW YORK, NY 10110

EXAMINER

KUMAR, PREETI

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

01/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/801,453	SIMONSEN, OLE	
	Examiner	Art Unit	
	Preeti Kumar	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-17, 19, 21, 23 and 26 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13, 17, 19, 21, 23 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/2007 has been entered.

Election/Restrictions

2. Newly submitted claim 26 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: New claim 26 is a method claim, which method is independent from the the granule of claim 1 and its dependent product claims. Applicants will remember in the office action mailed 10/11/2006 and 1/16/2007, method claims 14-16 had been restricted out from the product claims 1-9, 11-13 and 17, 19, 21, 23, and as such, newly presented method claim 26 is also subject to the same restriction requirement. The product of claims 1-9, 11-13 and 17, 19, 21, 23 and the process of making the composition as presented in claim 26, are independent or distinct inventions since the process as claimed can be used to make another and materially different product such as an enzymatic liquid detergent capsule composition and there would be a serious burden on the examiner if restriction is not required because the inventions require a different searches (see MPEP § 808.02), thus, restriction requirement is still deemed proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 26 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Non-Final Rejection

3. Claim 1 is amended. Claim 26 is a newly added method claim. Claims 14-16, 26 are withdrawn from consideration. Claims 10, 18, 20, 22, and 24-25 are cancelled.
4. Claims 1-9, 11-13 and 17, 19, 21, and 23 are pending.

Response to Amendment

5. The rejection of claims 1-9, 11-13, 17, 19, 21 and 23 under 35 U.S.C. 112, second paragraph, is withdrawn in light of applicants amendment to the claims identifying the synthetic polymer is a admixture of polyethylene glycol.
6. The rejection of claims 1-9, 11-13, 17, 19, 21, and 23 are rejected under 35 U.S.C. 103(a) as obvious over Nicholson et al. (US 5, 480,577) is withdrawn in light of Applicants amendment.
7. The rejection of claims 1-9, 11-13, 17, 19, 21, and 23 under 35 U.S.C. 102(b) as anticipated by Markussen et al. (WO 89/08694) is withdrawn upon further consideration.
8. The rejection of claims 1-9, 11-13, 17, 19, 21, and 23 under 35 U.S.C. 103(a) as obvious over Markussen et al. (WO 89/08694) is maintained.
9. The rejection of claims 1-9, 11-13, 17, 19, 21, and 23 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Andela et al. (WO 96/16151) is maintained.

Response to Arguments

10. Applicant's arguments filed 10/30/2007 have been fully considered but they are not persuasive.

Applicants urge that each of the prior art made of record do not show the claimed molecular weight distribution as recited in the claim 1. Specifically, Applicants urge that each of the prior art made of record do not teach the claimed synthetic polymer wax composition having the claimed molecular weight distribution and three PEG constituents.

In response to Applicants arguments, Examiner notes that the claimed distributions overlap one another and accordingly (a) and (b) (having 0.75xMw) can be one and the same also (b) and (c) (having 1.25xMw) can be one and the same, thus, the instant claims read in their broadest interpretation recites a minimum of 2, not 3, PEG's. [0076-0078] of Applicants specification recite the claimed waxes or mixture of waxes have an average molecular weight (Mw) of more than 1000.

In response to Applicants arguments to Markussen et al., the rejection has been maintained since Markussen et al. exemplify a granulate coated with 7% PEG 4000 which teaching is encompassed by the claimed average molecular weight. Regarding the claimed ratio of at least 10% as recited by the instant claims, Markussen et al. teach one of ordinary skill to optimize the ratio of the coating agent between 10 and 100%. See page 6,ln.10-11. Markussen et al. teach that if the coating contains less than 10% of the coating agent(such as the exemplified 7% PEG 4000), the impermeability of the

coating is not satisfactory. See page 6,ln.12-14. Accordingly, Markussen et al. motivate one of ordinary skill to formulate a granulate having at least 10% PEG.

In response to Applicants arguments to Andela et al., the rejection has been maintained since Andela et al. exemplify various blends of polyethylene glycols, all of which meet the claimed admixture of waxes having an average molecular weight (Mw) as recited by the specification. See page 9.

New Grounds of Rejections

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-9, 11-13, 17, 19, 21, 23 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner does not find support for the claimed language of "...a first polyethylene glycol having a first average molecular weight, a second polyethylene glycol having a second average molecular weight, and a third polyethylene glycol having a third average molecular weight". Examiner does find support for the synthetic polymer wax composition being an admixture of polyethylene glycol in at least [0038] and [0049].

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 1-9, 11-13, 17, 19, 21, and 23 are rejected under 35 U.S.C. 103(a) as obvious over Markussen et al. (WO 89/08694).

Markussen et al. teach a detergent enzyme product comprising a core of an enzyme containing material with a coating containing a mono and/or diglyceride of a fatty acid, with a content of monoglyceride in relation to the total amount of mono and diglyceride of at least 30% by weight and with a melting point above 35C. Due to the coating the enzymatic stability is enhanced. See abstract.

Markussen et al. teach that the coating agent has a melting point above 35C, preferably above 50C. See page 5, line 10.

In examples 1 and 2 on pages 9-10, Markussen et al. illustrate a mixture of 1) around 90% of monoglyceride of palmitic acid and stearic acid and around 10% of diglyceride of palmitic acid and stearic acid. In examples 2 and 3, Markussen et al. illustrate a mixture with PEG 4000. The weight of the coating is between 0.1 and 100% by weight of the core. See page 5, line.30-35.

Markussen et al. exemplify a granulate coated with 7% PEG 4000 which teaching is encompassed by the claimed average molecular weight. Regarding the claimed ratio of at least 10% as recited by the instant claims, Markussen et al. teach one of ordinary skill to optimize the ratio of the coating agent between 10 and 100%. See page 6,ln.10-11. Markussen et al. teach that if the coating contains less than 10% of the coating agent(such as the exemplified 7% PEG 4000), the impermeability of the coating is not

satisfactory. See page 6,ln.12-14. Accordingly, Markussen et al. motivate one of ordinary skill to formulate a granulate having at least 10% PEG.

Markussen et al. do not teach the claimed weight ratio of at least 2 polyethylene glycol componets within the synthetic polymer wax composition.

However, it would have been obvious, at the time the invention was made to arrive at a coated granulate having at least 2 polyethylene glyols because Markussen et al. suggest the coating of enzyme protein granulates with PEG 4000 and suggest the utility of more than one coating agent or an undercoat to protect the core. See pg. 6-7. It would have been obvious to one of ordinary skill, to optimize the claimed weight ratio of the wax coating because optimizing the ratio of the waxes to result in a coating have the desired melting point involves only routine skill in the art and Markussen et al. teach one of ordinary skill to optimize the ratio of the coating agent between 10 and 100%. See page 6,ln.10-11.

13. Claims 1-13 and 17, 19, 21, and 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Andela et al. (WO 96/16151).

Andela et al. teach a coated enzyme granule and a method of preparing coated enzyme granules including the steps of (i) contacting enzyme granules with a coating material which is either (a) a non-aqueous liquid or aqueous emulsion thereof, or (b) an unctuous mixture comprising at least one liquid as in (a) having dissolved therein a second component having a melting point in the range 30 to 90 C, said contacting being carried out so as to provide a substantially uniform coating on said granules of said

coating material at less than 25 wt.%, and (ii) contacting the granules formed in step (i) with an anti-caking agent so as to obtain free-flowing granules. See abstract.

Specifically regarding the waxes, Andela et al. teach suitable PEG are preferably greater than 1500 and specifically teach a blend of PEG 4000:400 in a liquid to solid ratio of 5:3 or 1:1 provides a homogenous coating formulation. Andela et al. also teach suitable glycerol monostearate and paraffin waxes and beeswax. See page 9,ln.5-10, ln.20-35.

Specifically regarding the anti caking agent, Andela et al. teach fumed silica, calcium phosphate, TiO₂, talcum powder, coar/cereal starch materials. See page 10,ln.30-34.

Specifically regarding the T_m, Andela et al. teach that the coating composition should have a melting point in the range of 30-90 C, preferably 50-70 C. See page 9,ln.15-16.

In example 1, on page 11, Andela et al. illustrate a coated enzyme granule comprising 30g of a mixture of PEG 4000 :400 in a 3 :5 ratio at 55C and 15g of an anticaking agent. In example 2, on page 11, Andela et al. illustrate a coated enzyme granule comprising 5g of paraffin oil : glycerol monostearate in a 1:1 ratio and comprising 5 g of anticaking agent.

Andela et al. are silent as to the three distinct weight ratios of the waxes in the coating. However, it is reasonable to presume that said limitations are encompassed by the invention of Andela et al. because the presumption is supported by the use of similar materials (i.e. glycerides and PEG) and in the similar production steps (i.e.

coating an enzyme protein) to produce the encapsulated granule having the claimed melting point. The burden is upon the applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Accordingly, the teachings of Markussen et al. anticipate the material limitations of the instant claims.

In the alternative, it would have been obvious to one of ordinary skill, to optimize the claimed weight ratio of the wax coating because optimizing the ratio of the waxes to result in a coating have the desired melting point involves only routine skill in the art.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on 6:30 am-2:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/801,453
Art Unit: 1796

Page 10

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner Preeti Kumar
Art Unit 1796

/PK/

/Vasu Jagannathan/
Supervisory Patent Examiner
Technology Center 1700